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WHAT'S NEW IN LANGUAGE ARTS--SPELLING.

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AS OUR UNDERSTANDING OF THE LEARNING PROCESS AND OF THE NATURE AND FUNCTION OF SPOKEN AND WRITTEN AMERICAN-ENGLISH INCREASES, SPELLING INSTRUCTION IN THE ELEMENTARY SCHOOLS IS UNDERGOING A DRASTIC CHANGE. RECENT RESEARCH HAS REVEALED A BASIC LOGIC BEHIND THE SOUND-TO-LETTER RELATIONSHIP HITHERTO THOUGHT TO BE HAPHAZARD. BASED ON THE PREMISE THAT WRITTEN LANGUAGE IS SIMPLY A MEANS TO REFLECT ORAL LANGUAGE THROUGH WRITTEN SYMBOLS, EMERGING SPELLING PROGRAMS ARE ATTEMPTING TO HELP CHILDREN PERCEIVE THE SYSTEM IN AMERICAN-ENGLISH SPELLING BY--(1) STRESSING AS A FOUNDATION FOR THE STUDY AND MASTERY OF WORDS THE ALPHABETIC NATURE OF ENGLISH ORTHOGRAPHY, AS OPPOSED TO LOGOGRAPHIC OR SYLLABARY ORTHOGRAPHIES, (2) UTILIZING THE HISTORY OF THE WRITING SYSTEM TO HELP CHILDREN UNDERSTAND BOTH THE SOURCES AND MEANINGS OF WORDS AND THEIR EFFECTS UPON THE SPELLING OF MANY WORDS, (3) EMPHASIZING THE CHILDREN'S ABILITY TO PROOFREAD AND TO CORRECT THEMSELVES THROUGH DEVELOPMENT OF THE DICTIONARY HABIT, (4) HELPING CHILDREN FIND METHODS FOR DIAGNOSING THOSE ELEMENTS OF ORAL LANGUAGE WHICH ARE AN AID TO SPELLING WORDS, (5) ENSURING THAT CHILDREN EMPLOY, IN LEARNING TO SPELL, THE SENSORY PROCESSES OF AUDITION, VISION, AND FEELING, AS WELL AS THE PROCESSES OF REASONING AND SPEAKING, AND (6) URGING CHILDREN TO APPLY THE PRINCIPLES OF LANGUAGE TO THEIR SPELLING. (THIS DOCUMENT IS AVAILABLE FROM THE NATIONAL EDUCATION ASSN., 1201 16TH ST., N.W., WASHINGTON, D.C. 20036, STOCK NO. 282-08828.) (JB)

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Linguists are concerned with the scholarly study of language. Although there are many branches of linguistics, one area in particular is bringing about a marked transformation in both the content and methods of elementary school language arts, including spelling. This area is structural linguistics.

A structural linguist seeks to identify those elements and their interrelationships which comprise the structure of a language. From such studies have emerged greater, and more accurate, understandings of the nature and function of our own language—American English. These new understandings suggest important implications for the teaching of English in the schools (1). In order to grasp the significance of these findings as they relate to elementary school spelling programs, let us first review how the nature and processes of spelling are viewed from a linguistic vantage point.

Spelling: A Linguistic View

A basic linguistic premise asserts that written language is simply a means to reflect oral language through graphic symbols. Historically, of course, the world's languages began in the form of speech. As time passed, writing systems were developed in order that speakers of a language could record their oral communications in more permanent ways than the voice allows. These writing systems, or *orthographies*, were marvels of ingenuity, for they enabled people to transmit their thoughts and ideas to persons beyond the range of the human voice and on to future generations. It seems fair to suggest that the development of writing systems affected the course of history fully as much as the invention of the wheel.

Although all writing systems do perform this essential function, they may do so in three different ways. A relatively few orthographies employ written symbols to represent the *words* of spoken language. Known as *logographic* orthographies, such word-writing systems generally employ as many written symbols as there are words of oral language—literally thousands. Such writing systems are therefore quite difficult to learn.

A second type of orthography is the *syllabary*, a writing system that employs graphic symbols to represent the syllables of words. Since there are fewer syllables than words in spoken language, syllabic writing reduces the number of written symbols one must master in order to be able to read and write. But mastering a syllabary still requires learning to recognize and reproduce many graphic symbols.

The orthography predominant among present-day written languages is called an *alphabetic* orthography and marks one of mankind's great intellectual achievements. In an alphabetic orthography, graphic symbols are employed to represent the speech sounds of a language—the *phonemes* of that language. Because there are far fewer phonemes than there are syllables and words in a language, alphabetic writing is more efficient than any other system. Let us describe how one learns to write in an alphabetic orthography.

Persons learning to speak a language acquire a mastery of the phonemes that comprise the words of the language. Thus, if a language con-

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tains 30 phonemes that combine in various ways to build words, one must at least intuitively be able to differentiate 30 sounds, and slight variations of them. In a "pure" alphabetic orthography, each such phoneme would have its own unique graphic symbol—its alphabetic counterpart. Consequently, in order to spell a word in alphabetic writing, an individual would need only be able to tell what phonemes are contained in the word, know which graphic symbol stands for each phoneme, and then write the graphic symbols in the same order as he hears and pronounces the phonemes of the spoken word.

Unfortunately, however, no alphabetic writing system exists in this pure state, although some come quite close to it. American English employs an *alphabetically based* orthography. And it is this fact that linguists have brought to the attention of those who are concerned with formulating spelling programs for elementary schools.

Recent Research in Spelling

American-English orthography traditionally has been viewed as a cumbrous and haphazard representation of oral language. This view has been so prevalent, in fact, that the teaching of spelling has largely proceeded upon the assumption that both the content and the methods of spelling instruction should avoid highlighting the alphabetic basis of the orthography. As a consequence, much spelling research has been concerned with efforts to improve the *methods* of spelling instruction, while paying little attention to the substance which these methods were meant to teach.

A recently completed U.S. Office of Education study, however, has helped to clarify the nature of our American-English writing system (2). Based upon linguistic insights about our system and using computer technology, this research pointed out that, while we by no means have a "pure" alphabetic orthography, the relationships between the sounds of spoken language and their alphabetic counterparts are not nearly so haphazard as most persons have believed (3, 4).

The researchers analyzed the spellings of more than 17,000 different words that form the core of the American-English language. They found that most phonemes, when carefully analyzed in terms of *where* they occur in syllables and words, are commonly spelled in specific ways. For example, although the "f" sound may be spelled *f*, *ff*, *gh*, or *ph* (e.g., *f*ish, o*ff*, rou*gh*, and *ph*one), it is never spelled *ff* or *gh* at the beginning of a word. Indeed, the "f" sound is spelled *f* at the beginning of a word about 85 percent of the time in *all* the words an American-English writer might have occasion to use.

Even more dramatic is the spelling of the short "i" sound, which can be spelled 22 different ways in our writing system. The surfeit of spellings of this vowel sound apparently substantiates the view that the orthography is haphazard. Yet, a careful analysis reveals that the short "i" sound is spelled *i* more than 80 percent of the time at the beginning and in the middle of syllables and in one-syllable words. The other 21 spellings are relatively rare representations of this vowel sound.

Other useful sound-to-letter relationships were clarified in this research, and the phonemes of the language which are indeed haphazard in their written representations were identified. The most important contribution of this research, however, has been in calling attention to the fact that we *do have* an alphabetically based orthography, an orthography which contains numerous sound-to-letter relationships potentially useful to the child learning to spell.

But, how useful? In order to find out, a second part of the research undertook to determine whether or not these relationships could actually be used to spell words. A computer was programed to attempt to spell the 17,000 words of the study on the basis of sound-to-letter cues. More than 8,000 words (about 50 percent) were spelled correctly in this fashion.

Clearly, no teacher would accept only 50 percent accuracy in spelling. It was also found, however, that an additional 6,332 words (37 percent) contained only one error each and that these errors were principally due to two factors: misspelling of compound words (*playground* was spelled *plaground*) and misspelling of words containing certain prefixes and suffixes (*address* was spelled *adress*). In short, had the computer been programed with some of the important facts about how we build words in American English, it could have spelled more than 87 percent of the words

correctly. The remaining 13 percent of the words analyzed in this study contained two errors or more; but even these errors could be accounted for. It's clear that our seemingly haphazard orthography has in fact a great deal of logic underlying it.

Such studies as this represent the kinds of insights which linguistic science and careful analysis can provide for developing more effective language arts programs. If they are coupled with an increasing understanding of how children learn a language, it seems likely that language arts, of which spelling is a part, will in the very near future be as different from its traditional form as the "new" math is from the elementary school arithmetic programs of a few short years ago.

Emerging Spelling Programs

Both the content and the methods of emerging spelling programs reflect increasing understandings of what our writing system is like and how we learn to speak and write. Let's focus on six of the more relevant understandings and see how they are being translated into the spelling curriculum.

1. *American-English spelling is alphabetically based.* It employs alphabet letters and their combinations to represent the speech sounds (phonemes) of oral language. Modern spelling programs therefore emphasize the alphabetic base that characterizes American-English spelling. Beginning spelling programs, for example, help pupils to understand how spoken words are made by combining phonemes in various ways to produce all the words of our language. Pupils then are led to the discovery that letters of the alphabet are used to represent these sounds and that many sounds have highly consistent spellings.

Through the school years, more complex sound-to-letter relationships are presented, relationships which, though less reliable, are fundamental in understanding fully the ways in which our writing system both reflects and departs from its alphabetic base. In short, emerging spelling programs stress the alphabetic nature of our orthography as a base for the study and mastery of the words used by pupils in writing.

2. *American English is a word-building and word-borrowing language.* By using affixes (prefixes and suffixes) and by the process of compounding, we are able to use many of the common words of our language in additional ways. Just as there are important sound-to-letter principles for representing speech sounds in writing, there are also important principles for the spelling of words containing affixes. For example, even though each of the verb forms *stop, grab,* and *bat* is made past tense by the addition of differently *pronounced* suffixes, each of these spoken suffixes is spelled *ed* (although, in these examples, the spelling of the final consonant must be doubled before adding *ed* because the vowel sound in each root word is "short"). Similarly, our writing system presents no special problem in the spelling of compound words, if one already knows how to spell the words forming the compound; e.g., *play + ground = playground.*

Our language reflects its heritage. Many of our common words are direct borrowings from other languages, and in borrowing them, we have sometimes retained the way these words are spelled in the language from which they have been taken. Consequently, emerging spelling programs utilize the history of the writing system itself to help pupils understand both the sources and meanings of words and their effects upon the spellings of many words.

3. *American-English spelling only partially reflects its alphabetic base.* We are all well aware that many words contain unusual, even unique, spellings of speech sounds. Indeed, these "errant" spellings lie at the heart of many spelling difficulties. Consequently, emerging spelling programs emphasize the development of pupils' abilities in self-correction or proofreading. Unlike writers of "pure" alphabetic writing systems, we must make educated guesses when spelling unfamiliar words. We are therefore obliged to determine whether or not our attempts have been successful. Consequently, considerable emphasis is placed upon developing the "dictionary habit" by using this important spelling tool to check for and correct possible spelling errors.

4. *The child comes to school with a substantial oral-aural vocabulary.* Language is first learned in oral form. When they reach school entrance age, most children have acquired the basic structure of spoken language, at least as it is represented in their home situations. Modern spelling

programs capitalize upon the child's largely intuitive familiarity with his spoken language, help him to understand that writing somewhat reflects speaking, and help him to develop methods for diagnosing those elements of oral language which are helpful in spelling words. Such methods include the recognition of vocal sounds, syllables, stress, and affixes.

5. *Learning to spell is a multisensory process.* Together with the act of speaking and the process of reasoning, spelling involves the senses of audition, vision, and feeling. In writing a new word, we draw upon our auditory recollection of the word, we see the word when we have written it, and we gain an implicit sense of the "feel" of the word as we write. In combination, then, these senses support and reinforce each other. They constitute the resources for the development of a mastery of written language. New spelling programs, therefore, seek to ensure that each of these sensory processes is employed in the process of learning to spell.

6. *Self-discovery and application of concepts enhance more permanent learning.* From the vantage point of the developers of new spelling programs, the memorization of important written language principles is much *less* important than the child's application of these principles in his daily spelling. Unlike traditional spelling programs that stressed the "overlearning" of spellings of words to ensure their mastery and the verbalization of a few spelling principles, modern spelling programs emphasize the development of *strategies* for spelling which the child has developed through his study of the written language. In final analysis, spelling ability is measured not solely by achievement on spelling tests but by how a person spells in his daily writing.

Summary

Modern spelling programs are endeavoring to help children develop intellectual maps of the terrain of our writing system; that is, familiarity with important facts and generalizations about American-English spelling that will make it possible for a child to be limited in his writing vocabulary only by the size of his speaking vocabulary. Such a goal seems possible to attain with our increasing understanding of the nature and function of spoken and written language and of the learning process.

Spelling is only one aspect of the total language arts program; but it is a crucial part, because spelling ability is important in our society. Like other subject matter areas of the elementary school curriculum, spelling is undergoing drastic change in light of increasing knowledge about the learner and about the American-English language. The challenge of the new programs should be exciting as well as rewarding for both pupils and teachers.

Selected Bibliography

1. Francis, W. Nelson. *The Structure of American English.* New York: Ronald Press Co., 1958.
2. Hanna, Paul R., and others. *Phoneme-Grapheme Correspondences as Cues to Spelling Improvement.* U.S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Project No. 1991. Washington, D.C.: Government Printing Office, 1966. 1716 pp.
3. Hodges, Richard E. "The Case for Teaching Sound-to-Letter Correspondences in Spelling." *Elementary School Journal* 66:327-36; March 1966.
4. Hodges, Richard E., and Rudorf, E. Hugh. "Searching Linguistics for Cues for the Teaching of Spelling." *Elementary English* 42:527-33; May 1965.

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